IN THE SPECIFICATION

Please amend the specification as follows.

Please replace paragraph [0020] with the following amended paragraph [0020].

[0020] In the exemplary embodiment, the oxygen sensor cell 206 is a Nernst cell (206) that is positioned adjacent to a pump cell 204 in accordance with known techniques. Other types of oxygen sensor cells 206 may be used, however. It is understood by those skilled in the art that although the following description refers to a Nernst cell (206), the invention may be implemented with other oxygen sensor cells 206 capable of providing an output signal based on the oxygen level in a measured gas. After a calibration procedure is performed in accordance with the procedure described below, the current managing unit 216 varies the current 208 through the pump cell 204 between a constant positive current (Ip) and a constant negative current (-Ip) based on the output signal of the Nernst cell (206). When a negative current (-Ip) flows through the pump cell 204, ambient air is received through the air opening 214 into the measuring cell 202 through the pump circuit which results in an increase of the concentration of oxygen within the measuring cell 202. At a high concentration of oxygen within the measuring cell 202, the Nernst cell (206) provides a low voltage signal output. When an output signal lower threshold is reached, the current managing unit 216, directs a positive current (Ip) through the pump cell 204. When a positive current (Ip) flows through the pump cell 204, the oxygen ions in the measuring cell 202 flow out to ambient air. Any unburned carbons or fuel within the measuring cell 202 combine with any remaining oxygen. As a result, the mixture of air and unburned carbons within the measuring cell 202 decreases in oxygen concentration and increases in fuel concentration. The output signal increases through the transition point where no unburned fuel and no excess oxygen is present in the measuring cell 202. At this transition point, lambda is equal to 1.0 and the Nernst cell (206) provides an output signal of approximately 450 mV. As the positive pump current 208 (Ip) continues to flow, oxygen ions continue to flow out of the air opening 214. As a result, the concentration of oxygen continues to decrease and the concentration of fuel increases in the measuring cell 202. The output signal continues to increase until an upper threshold is reached. In response to detecting that the upper threshold has been reached, the current managing unit 216 changes the direction of the pump current 208. In the exemplary embodiment, the upper threshold is 455 mV and the lower threshold is 445 mV. Other thresholds, however, can be used where some suitable values include values providing a range that includes the output signal for gas of ambient air and which

maintain the Nernst cell (206) within a relatively linear potion of the lambda to voltage relationship. For example, another suitable pair of values includes 440 mV and 460mV.